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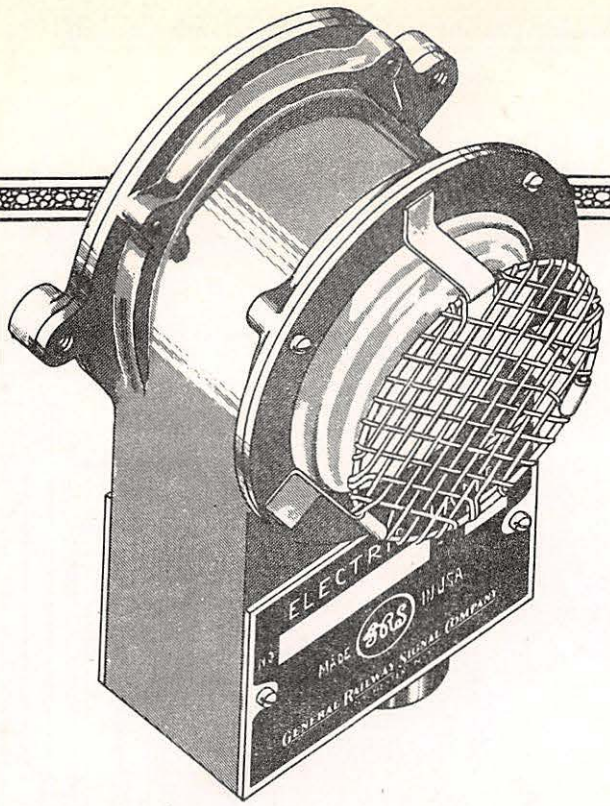

MOTOR CAR INDICATOR LAMP

to Provide Signal Protection for Motor Cars

D50.0301

SEPTEMBER 1947

GENERAL RAILWAY SIGNAL COMPANY
ROCHESTER, N. Y.

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G-R-S DEVELOPMENT SHEET

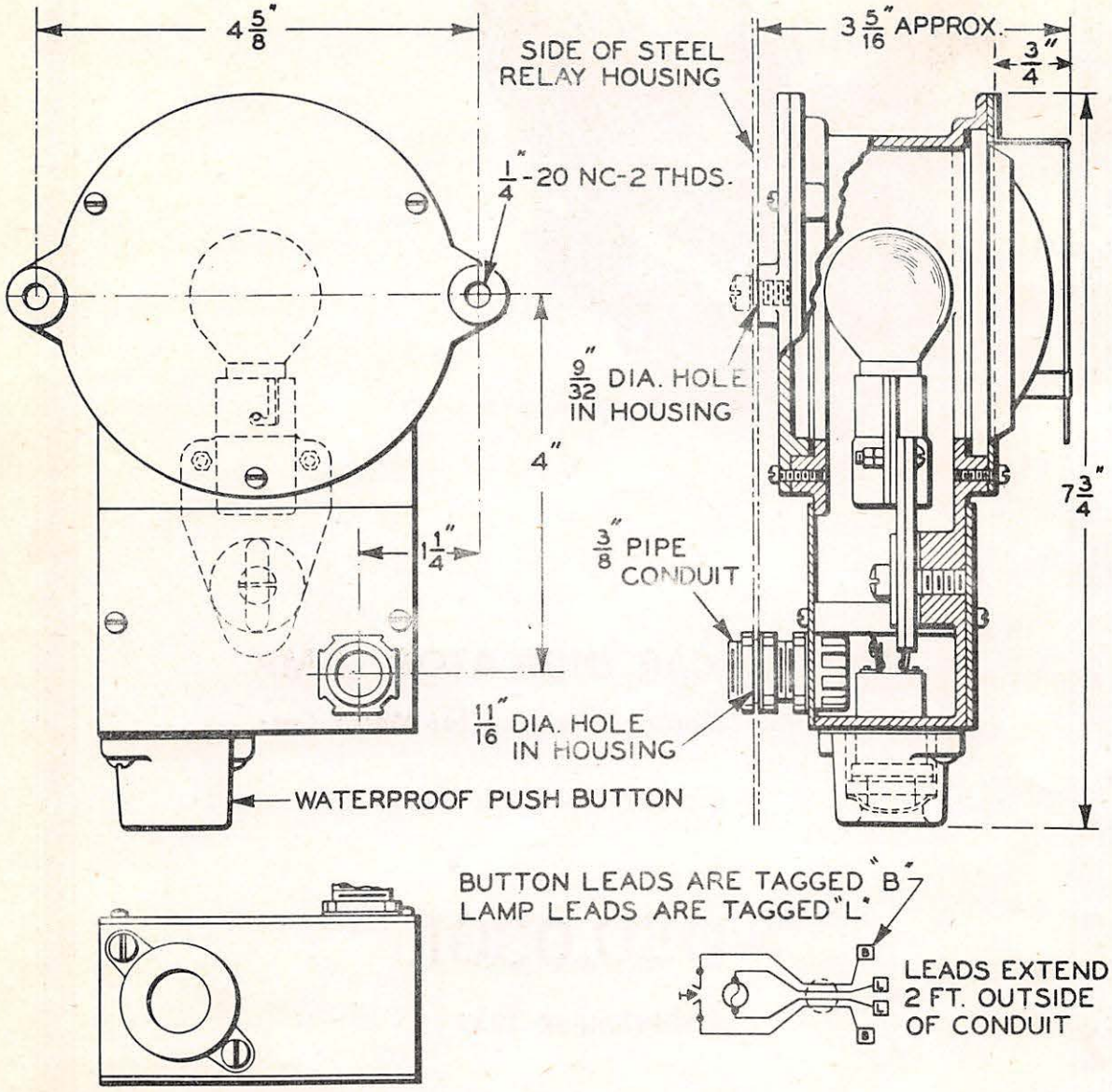


Figure 1. G-R-S motor car indicator lamp.

The G-R-S motor car indicator lamp, Figure 1, consists of a weatherproof lamp unit and pushbutton combined in one neat, compact housing. Although this lamp is particularly designed for use in motor car protection signaling, its compactness and easy mounting features make it useful wherever a weatherproof indicating lamp of this type may be required.

CONSTRUCTION

The main body of the housing is of cast aluminum. All joints are securely sealed with non-hardening cement so that the entire unit is waterproof and insect proof. The socket is the standard single-contact candelabra bayonet-base type. Any lamp bulb of this type may be used if its diameter does not exceed 1-3/8 inches.

The clear, standard optical lens is 3-1/2 inches in diameter. A heavy wire guard protects the lens. Guard supports are electrically welded to the bezel ring.

The single-contact, normally open pushbutton is of fully weatherproof construction. It is rated at 110 volts. Two-foot leads of number sixteen flexible stranded wire are supplied already connected to the lamp and pushbutton terminals. Leads are tagged as shown in Figure 1.

FINISH

The exterior is finished with one coat of zinc chromate iron oxide primer and two coats of synthetic black enamel. The interior is finished with one coat of white undercoat primer and one coat of white baking enamel. All iron parts, such as the bezel ring, lens guard, and pushbutton housing, are bonderized before painting.

INSTALLATION

Installation details are shown in Figure 1. Only three holes need be drilled in the side of a steel relay housing, two for the mounting screws and one for the 3/8-inch pipe conduit.

G-R-S DEVELOPMENT SHEET

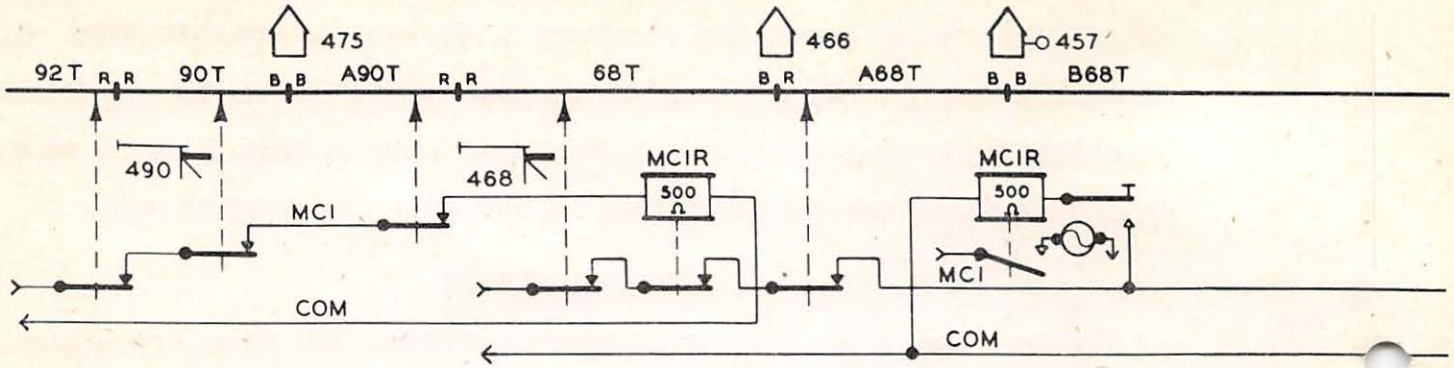
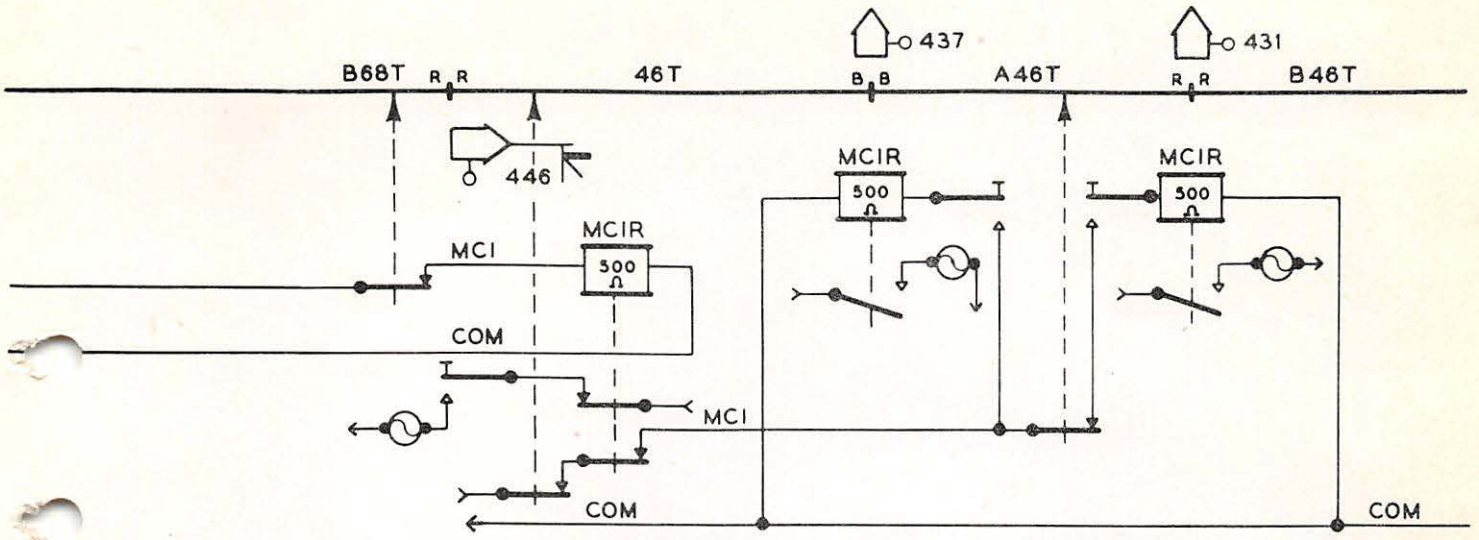


Figure 2. Typical motor car indicator circuit as used with automatic block signaling.

TYPICAL CIRCUIT

Figure 2 is a simplification of part of an actual location plan and circuit employed in a recent installation. To check whether a train is approaching, the motor car operator presses the button in the bottom of the lamp unit. If the track circuits to the rear are unoccupied, the lamp will light. Note that only one additional wire, MCI, is required for the motor car indicator circuit. The common serves as the other leg of the two-wire circuit.

The general principle is that a motor car indicator relay, MCIR, is checked through the front contacts of as many track relays as it is desired to extend the control. The distance that the check circuit is taken back depends, of course, upon the geographic layout of the tracks and the operating conditions that prevail in a given vicinity. At locations where the common is broken, such as at signal 446, MCIR is in series with MCI and common,



and is thus normally energized. The feed to the indicator lamp is taken through MCIR front and the normally open pushbutton.

At locations where the common is unbroken, such as at location 457, MCIR is connected across MCI and common in series with the normally open pushbutton. The indicator lamp is fed directly through MCIR front.

Signal location 468 illustrates the method of taking the control circuit past a break in the common wire at locations where an indicator lamp is not required.

ORDERING INFORMATION

Specify motor car indicator lamp number 56598-3 and state quantity required. To order lamp bulbs, see G-R-S Catalog Section H, Part 39, Plate H3901. Any single-contact, candelabra, bayonet-base lamp bulb shown on these plates will fit if the bulb diameter is not greater than 1-3/8 inches.